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Heart Failure and Cardiomyopathies

UPSTREAM USE OF ELECTRONIC DATA TO DISCOVER PATIENTS ELIGIBLE FOR ADVANCED HEART FAILURE THERAPIES

Poster Contributions

Poster Hall B1

Saturday, March 14, 2015, 10:00 a.m.-10:45 a.m.

Session Title: Stage D and Beyond: Advanced Heart Failure, Mechanical Circulatory Support and Transplantation

Abstract Category: 15. Heart Failure and Cardiomyopathies: Therapy

Presentation Number: 1112-189

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Background: About 5% - 10% of heart failure (HF) patients have advanced disease, some of whom may be candidates for advanced HF therapies including heart transplantation and left ventricular assist devices (LVAD). To guide the appropriate recognition and timely referral of these patients, we evaluated the ability of our electronic medical record (EMR) to capture data for the evaluation of criteria for advanced HF, adapted from the 2013 ACCF/AHA HF Guidelines.

Methods: Data from patients discharged in 2012 across 12 Intermountain Healthcare hospitals were analyzed. For eligible patients with an ejection fraction (EF) $\leq 35\%$, the EMR was queried for specific clinical and laboratory criteria that may be associated with advanced HF. The number of patients who met criteria was quantified.

Results: A total of 839 patients with an EF $\leq 35\%$ (mean age 60 ± 13 years) were considered for evaluation. Forty-five patients were excluded because they had an LVAD or a transplant. Specific criteria and frequency are shown in Table 1. In this group of patients, 536 (67.5%) met 1 or more criteria, 286 (36.0%) met 2 or more criteria, 108 (13.6%) met 3 or more criteria, 42 (5.3%) met 4 or more criteria, and 5 (0.6%) met 5 criteria. On average, 44 patients per month met 1 or more criteria.

Conclusion: The EMR can be effectively utilized to query for criteria indicative of advanced HF. Transforming this method into a real-time electronic prompt could allow for enhanced patient screening and earlier referral for advanced therapies.

Table 1. Advanced Heart Failure Criteria in Patients Potentially at Risk for Advanced Disease

Study Cohort	n = 794
≥ 2 hospitalizations or ED visits for HF within the previous year	17 (2.1%)
Blood urea nitrogen > 40 mg/dL	180 (22.7%)
Creatinine > 1.8 mg/dL	150 (18.9%)
≥ 2 recordings of systolic blood pressure < 90 mmHg	431 (54.3%)
Sodium < 133 mEq/L	199 (25.1%)